

PUSTOVOYTOV, N.D.

PUSTOVOYTOV, N.D.

Physical properties and water and air balance of soils of the south-western part of the Zeya-Bureya Plain [with summary in English].
Pochvovedenie no.6:43-54 Je '57. (MLRA 10:9)

1. Sovet po izucheniyu proizvoditel'nykh sil Akademii nauk SSSR.
(Zeya-Bureya Plain--Soils)

Pustovoyt, Yu. M.

KONDRASHEV, L.F.; NEMENOV, L.P.; NOVIKOV, G.M.; PUSTOVOYT, Yu.M.; KHALDIN, N.N.,
CHUBAKOV, A.A.

Gas supply stands for cyclotron ion sources. Prib.i tekhn.eksp.
no.3:23-25 My-Je '57. (MIRA 10:9)
(Cyclotron) (ionization of gases)

USSR/Soil Science. Physical and Chemical Properties of Soil

J-1

Abs Jour : Ref Zhur - Biol., No 10, 1958, No 43755

Author : Fustovoytov N.D.

Inst : Not Given

Title : The Physical Properties and Air and Water Conditions Prevalent in the Soils of the South West Part of the Zeysko-Bureinskaya Plain.

Orig Pub : Pochvovedeniye, 1957, No 6, 43-55 (resume. in Eng.)

Abstract : The main soil cover in the area which was studied is made up of meadow soils of dark colored heavy loams and clays. The soils are saline; the ratio of Ca: Mg in them is 2.8:1 -1.5:1. As a result of this, there is a low water-tightness in the system, a strong increase in volume weight going from a depth of 0.9-1.2 to 1.4-1.6 g. per cm³ and a reduction in total porosity of from 60-65% in the arable layer to 50% and less in the subtile horizon. The moisture holding capacity was reduced from the arable layer to the subarable one from 55-75 to 35-45%, and in the lower part of the profile from 25-30%

Card : 1/2

PUSTOVGYTOV, N.D.

Characteristics of the temperature conditions of some plain soils
in the Amur Valley. Pochvovedenie no.4:17-28 Ap '64.

(MIRA 17:10)

1. Pochvennyy Institut imeni V.V.Dokuchayeva.

PUSTOVOYTOV, N.D.

Principal land improvement system for the Amur Valley. Prochvo-
vedenie no.10:19-26 '60. (MIRA 13:10)

1. Sovet po izucheniya proizvoditel'nykh sil pri Prezidiume
Akademii nauk SSSR.
(Amur Valley--Soils)

PUSTOVOYTOV, N.D.

Instrument for determining the stability of soil structure in
undisturbed soil samples [with French summary in insert]. Po-
chvovedenie no.7:111-114 J1 '56. (MLRA 9:11)

1. Pochvennyy institut imeni V.V.Dokuchaeva Akademii nauk SSSR.
(Soil physics)

I. 55084-65 EWT(d)/EPA(s)-2/EWT(m)/EWP(w)/EPP(c)/EWI(s)-2/EWP(v)/EPR/T/
EWP(j)/EWP(k)/EWA(h) Pc-4/Pf-4/Pr-4/Ps-4/Pt-7/Peb/Pw-4 WW/EM/RM
ACCESSION NR: AP5018103 UN/0097/64/000/009/0412/0416

AUTHOR: Mikhaylov, K. V. (Candidate of technical sciences); Popov, A. N.
(Candidate of technical sciences); Pustovoytov, V. P. (Engineer) 54/B

TITLE: Concrete pressure pipes with continuous fibreglass reinforcement 15

SOURCE: Beton i zhelezobeton, no. 9, 1964, 412-416

TOPIC TAGS: reinforced concrete, pipe, fiberglass

ABSTRACT: Several years ago the Scientific Research Institute of Reinforced
Concrete with the Khar'kov Institute of Municipal

Card 1/2

L 55084-65

ACCESSION NR: AP501810³

The shell is formed by winding onto this core several layers of prestressed

etc., resin.

The following conclusions are made by the authors. In a series of cases it is possible to replace steel wire with fibreglass reinforcement in the production of reinforced concrete delivery pipes, which is expedient when pipes are layed in ground with a high saturation of stray currents and chemically active corrosive salts. This is because fibreglass, under certain conditions, does not deteriorate under these conditions.

Orig. art. has: 7 figures, 1 graph, 1 table.

ASSOCIATION: none

SUBMITTED: OO

NR REF SOV: 000

ENCL: OO

OTHER: 000

SUB CODE: MI

JPRS

Card 2/2

STEPANENKO, L., kand.tekhn.nauk; PUSTOVOYTOV, V., inzh.

Study of the protracted support of glass-reinforced plastic
rods for concrete reinforcement. Bud. mat. i konstr. 4 no.2:
35-37 Mr-Ap '62. (MIRA 15:9)
(Glass reinforced plastics--Testing)
(Concrete reinforcement)

ALIMOVA, Ye.K. (Lubenets); BOLGOVA, G.D.; PUSTOVOYTOVA, O.I.,

Paper chromatography of higher fatty acids by the use of urea.
Biokhimiia 25 no.5:773-780 3-0 '60. (MIRA 14:1)

1. Chair of Biochemistry, State Medical Institute, Rostov-on-Don.
(ACIDS, FATTY) (UREA)
(PAPER CHROMATOGRAPHY)

SKURATOVICH, L.K., inzh.; PUSTOVOYTOVSKIY, A.S., inzh.; GLAZUNOV, V.K., inzh.

Switch for long-distance retuning of an antenna circuit. Vest.
svyazi 20 no.11:9-11 N '60. (MIRA 13:12)

1. Belorusskiy respublikanskiy radiotsentr.
(Antennas (Electronics)) (Electric switchgear)

PUSTOVOYTOVSK IY, A.S., inzh.

Television transmitter with 1 kw. power rating based on the
TRSA-56 repeater. Vest. svyazi 29 no.10:3-6 0 '63. (MIRA 16:12)

86312

S/111/60/000/C11/004/004
B019/B067

9.1900

AUTHORS: Skuratovich, L. K., Engineer, Pustovoytsovskiy, A. S.,
Engineer, Glazunov, V. K., Engineer

TITLE: Switch for the Remote Retuning of an Antenna Circuit

PERIODICAL: Vestnik svyazi, 1960, No. 11, pp. 9 - 11

TEXT: A switch is described with which the antenna circuit in the antenna box can be retuned from the transmitter station. Retuning takes place by means of a remote-controlled electric motor which adjusts the mobile part of the switch. The mobile part glides in guides, and adjusts the wavelength desired. Adjustment is done with four metal rods which tune the cross-talk coupling capacity of the antenna, the shortening capacity, and the lengthening inductivity to the wavelength desired. Technical details, such as short-circuit proof reversing switches of the electric motor, are described in detail. There are 6 figures and 1 table.

Card 1/2

PUSTOVOYTOVSKIY, A.S., inzh.; GOLYAS, V.F., inzh.

Automated radio relay line. Vest. sviazi 25 no.6:19-21
Je '65. (MIRA 18:11)

FUSTOLKA, Eugeniusz, mgr inz.

Analysis of the influence of yield and temperature of the furnace
charge on the production amount of blooms. Hutnik P 28 no. 12:
460-461 D '61.

1. Huta "Pokoj."

FUTILOV, B. N.

"Istoricheskiye korni i genezis slavyanskikh ballad ob intseste."

report submitted for 7th Intl Cong, Anthropological & Ethnological Sciences,
Moscow, 3-10 Aug 64.

- 2/3

PUSHTANKOV, N.

"Analyses of the production-financial work of the state farms, a means for discovering additional reserves."

OTCHETNOST I KONTROL V SELSKOTO STOPANSTVO., Sofia, Bulgaria., Vol.4, No. 4, Apr. 1959

Monthly list of EAST EUROPEAN ACCESSIONS (EEAI). LC, Vol. 8, No. 7, July 1959. Unclass

PUSTRAKOV, N.

"Utilizing the basic funds on the state agricultural farms."

p. 187 (Otchernost i Kontrol Na Selskoto Stopanstvo, Vol. 3, No. 5, 1958,
Sofia, Bulgaria).

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 12, Dec. 58.

PUSTRAKOV, N.

The state agricultural farm in Burgas reduces cost price of milk, but the state agricultural farm in Stara Zagora increases it. p. 7.

Vol. 10, no. 12, Dec. 1955
KOOOPERATIVNO ZEMEDELIE
Sofiya, Bulgaria

So: Eastern European Accession Vol. 5 No. 1 April 1956

Accelerated annealing of malleable cast iron. V. V. Usov and N. N. Pustimirov. *Vestnik Metalloprod.* 10, 97-103(1930); *Chimie & industrie* 29, 352(1931).—The American process is too long, requiring 100-120 hrs. The General Electric Co. has succeeded in reducing the time required to 28-30 hrs., but this requires the use of an elec. furnace. U. and P. have endeavored to render the process suitable for application in ordinary case-hardening furnaces. Their work has shown that: (1) In order to accelerate graphitization of the free cementite, it is merely necessary to keep the iron above 1140° for 2 hrs., at the end of which time the metal consists exclusively of the solid soln. and of graphite; (2) To reduce the time required for graphitization of the cementite which seps. on cooling, the metal must be cooled rapidly to 710° and maintained 4 hrs. at this temp. to decompose the pearlite formed by cooling into ferrite and graphite. This process required only 8-10 hrs. in the lab. and 18 hrs. in a petroleum-heated muffle furnace.

A. PAPINBAU-COCTUR

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

REGIONAL INDEX
SATURDAY 11
STANDARD TIME
RECEIVED
STANDARD TIME

PUSTYGIN, A.

Use fertilizers properly. Zemledelie 26 no.3:75-77 Mr '64.
(MIRA 17:4)

1. Zamestitel' nachal'nika Volgogradskogo oblastnogo upravleniya
proizvodstva i zagotovok sel'skokhozyaystvennykh produktov.

ZHEGALIN, I.K.; PUSTYGIN, A.A., glav. agronom; SPODENYUK, N.I.; BYKOV, N.I.; REDIN, P.N., glav. agronom; LOGVIN, N.P., Geroy Socialisticheskogo Truda; GUSEV, I.D.; PETROV, S.N.; VLASOV, A.N., glav. zootekhnik; SHEREMET, L.D., glav. bukhgalter; SKAKUNOV, N.V., glav. inzh.; SHUMILIN, V.S., glav. inzh.; CHERNORUBASHKIN, N.A., kombayner; DRYABO, N.Ye.; ZABNEV, V.F., redaktor; SHIROKOV, B.G.; SHEPELEV, M.A.; LEONOVA, T.S.; SAYTANIDI, L.D., tekhn. red.

[Hundred million poods of grain from Stalingrad Province] 100 millionov pudov stalingradskogo khleba. Moskva: Izdatel'stvo M-sva sel'skhoz. RSFSR, 1960. 133 p. (MIRA 14:9)

1. Pervyy sekretar' Stalingradskogo oblastnogo Kompartii Kommunisticheskoy partii Sovetskogo Soyuza (for Zhegalin). 2. Oblastnoye upravleniye sel'skogo khozyaystva Stalingradskoy oblasti (for Pustygin). 3. Nekhayevskiy rayonnyy komitet Kommunisticheskoy partii Sovetskogo Soyuza (for Spodenyuk). 4. Nachal'nik Kotel'nikovskoy rayonnoy sel'skokhozyaystvennoy inspektsii, Krayniy Yugo-vostok (for Bykov). 5. Kolkhoz "Deminskiy" Novo-Annenskogo rayona, Stalingradskoy oblasti (for Redin). 6. Predsedatel' kolkhoza "Zavety Il'icha" Kalininskogo rayona (for Logvin). 7. Nachal'nik Novo-Annenskoy rayonnoy sel'skokhozyaystvennoy inspektsii (for Gusev). 8. Direktor sovkhoza imeni Frunze Serafimovichskogo rayona Stalingradskoy oblasti (for Petrov). 9. Stalingradskoye oblastnoye upravleniye sel'skogo khozyaystva (for Vlasov). 10. Sovkhoz "Dinamo" Nekhayevskogo rayona Stalingradskoy oblasti (for Sheremet).
(Continued on next card)

ZHEGALIN, I.K. — (continued) Card 2.

11. Oblastnoye upravleniye sel'skogo khozyaystva Stalingradskoy oblasti (for Skakunov). 12. Sovkhoz "Verkhne-Buzinovskiy" Stalingradskoy oblasti (for Shumilin). 13. Otdeleniye No.6 sovkhoza "Serebryakovskiy" Mikhaylovskogo rayona Stalingradskoy oblasti (for Chernorubashkin). 14. Zven'yevoy kolkhoza imeni Lenina Zhirnovskogo rayona Stalingradskoy oblasti (for Dryabo). 15. Danilovskaya rayonnaya gazeta "Kolkhoznoye znamya" Stalingradskoy oblasti (for Zabnev). 16. Zamestitel' predsedatelya oblastnogo ispolnitel'nogo komiteta Stalingradskoy oblasti (for Shirokov).

(Volgograd Province—Grain)

PUSTYGIN, M.A.

Directing the feeding of the layer and the grappling of the plant mass
by a pair of coupled rotors. Trakt. i sel'khozmash. no.7:26 J1 '65.

(MIRA 18:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'skokhozyaystvennogo
mashinostroyeniya, Moskva.

PUSTYGIN, M.A., doktor tekhn. nauk, prof.

Development of grain harvesting combines and units for straw
harvesting. Trakt. i sel'khoz mash. no.8:17-20 Ag '65.

(MIRA 18:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'-
skokhozyaystvennogo mashinostroyeniya, Moskva.

LAYKHTER, E.G.; CHUMAK, A.V., inzh., red.; BEZRUCHKIN, I.P., kand.tekhn.
 nauk, red.; ZANIN, A.V., kand.tekhn.nauk, red.; ZVOLINSKIY, N.P.,
 inzh., red.; IVANOV, I.S., inzh., red.; KLETSKIN, M.I., inzh., red.;
 PETROV, G.D., kand.tekhn.nauk, red.; PUSTYGIN, M.A., doktor tekhn.
 nauk, red.; RABINOVICH, I.P., kand.tekhn.nauk, red.; RUDASHEVSKIY,
 D.Sh., kand.tekhn.nauk, red.; SINEOKOV, G.N., doktor tekhn.nauk, red.;
 SYSOYEV, N.I., kand.tekhn.nauk, red.; FEDOROV, V.A., inzh., red.;
 CHAPKEVICH, A.A., kand.tekhn.nauk, red.; PONOMAREVA, A.A., tekhn.red.

[Bibliographic manual on tillage machinery and implements] Biblio-
 graficheskiy spravochnik po pochvoobrabatyvaiushchim mashinam i oru-
 diam. Moskva, Gosplanizdat. No.2. [Literature in the Russian
 language from 1730-1955] Literatura na russkom iazyke za 1730-1955 gg.
 Pod red. G.N.Sineokova. 1959. 263 p. (MIRA 13:9)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'sko-
 khozyaystvennogo mashinostroyeniya.

(Bibliography--Agricultural machinery)

PUSTYGIN, M.A., doktor tekhn.nauk, prof.

Future development of machinery for harvesting grain crops.
Trakt.i sel'khoz mash. 32 no.4:21-24 Ap '62. (MIRA 15:4)
(Harvesting machinery)

PUSTYGIN, M.A., doktor tekhn. nauk, prof.

Fourth Congress on Grain Harvesting Machinery. Trakt. i sel'khoz mash.
33 no.7:14-17 J1 '63. (MIRA 16:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'skokhozyaystven-
nogo mashinostroyeniya.

PUSTYGIN, M.A.

Exhibition of agricultural machinery in Paris. Trakt. i sel'khoz-
mash. no.8:42-44 Ag '64. (MIRA 17:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'skokhozyayst-
vennogo mashinostroyeniya.

PUSTYGIN, M.A.

AUTHOR: Kapitskiy, R.A., Engineer SOV-117-58-8-26/28

TITLE: All-Union Conference on Problems of Designing and Producing Agricultural Machines (Vsesoyuznaya konferentsiya po voprosam konstruirovaniya i proizvodstva sel'skokhozyaystvennykh mashin)

PERIODICAL: Mashinostroitel', 1958, Nr 8, p 46 (USSR)

ABSTRACT: The All-Union Scientific Technical Conference on problems of of designing and producing agricultural machines was convened in Rostov-on-Don in January 1958. The plenary session heard the report of Candidate of Technical Sciences A.Z. Zhuravlev, on the results of the execution of the resolutions made by the conference in 1953. Candidate of Technical Sciences Ya.M. Zhuk, VIM, read a paper on "The Results of the Study of the Two-Phase Method of Combine Harvesting in the USSR and of the Requirements of the System of Machines Needed for this Method". Candidate of Technical Sciences I.I. Trepenenkov, NATI, read on "The Methods for the Development of the Designing of Agricultural Tractors"; Doctor of Technical Sciences M.A. Pustygin, VISKhOM, on "The Principal Problems of the Development of Cereal Harvesting Combines"; Engineer V.D. Lavrent'yev on "Specialization and Cooperation in the Production of Agricultural Machines"; Engineer O.M. Kotovich, VISKhOM, on

Card 1/3

SOV-117-58-8-26/28

All-Union Conference on Problems of Designing and Producing Agricultural Machines

"Rational Profiles and Reduction of Assortment of Rolled Metal in Agricultural Machinebuilding"; Engineer G.M. Fedorishchenko on "Results of the Work of VNIIMESKh in the Field of the Electric Drive of Mobile Agricultural Machines"; Engineer P.V. Savich from the Institute of Machine Science of the UkrSSR Academy of Sciences on "The Determination of the Density of Soils by Means of Radioactive Isotopes"; Candidate of Technical Sciences S.A. Alferov, VISKhOM, on "The Design of Foreign Cereal Harvesting Combines"; Engineer A.I. Malitskiy on "New Designs of Corn-Harvesting Combines"; Candidate of Technical Sciences Ye.S. Bosoy on "Field Tests of Cutting Apparatus for an Ensilage Harvesting Combine"; the professor of the Khar'kov Polytechnical Institute A.I. Petrusov on "Methods for the Further Investigation of the Square-Pit Sowing Machine"; the lecturer of the Rostov Institute of Railroad Transport Engineers A.I. Zelenov on "A New Method for Cold Electric Welding for the Restitution of Rejected Details of Agricultural Machines"; the lecturer of the Novocherkassk Polytechnical Institute Ye.L. Lokshin on "Processing of Metals by Hydraulic

Card 2/3

SOV-117-58-8-26/28

All-Union Conference on Problems of Designing and Producing Agricultural Machines

Blows of Ultrasound Frequency"; and the engineer of the Rostov Scientific Research Technological Institute D.M. Nabrodov on "New Methods of Casting in Agricultural Machine-Building". The conference recommended close cooperation between the designing bureaus, the scientific research organizations and the chairs of the various institutes for the development of new agricultural machines taking into consideration zonal differences. Special attention should be paid to the automation of the control of the various mechanisms.

1. Agricultural machines - Design
2. Agricultural machines - Production
3. Conferences - Agricultural machines - Rostov-on-Don

Card 3/3

KALINKIN, B.N.; PUSTYL'NIK, B.I.; SARANTSEVA, V.R., tekhn. red.

[Elastic scattering of heavy ions in quasi-classical approximation] Uprugoe rasseianie tiazhelykh ionov v kvaziklassicheskoy priblizhenii. Dubna, Ob"edinennyi in-t yadernykh issl., 1962.
7 p. (MIRA 15:6)

(Ions—Scattering)

KALINKIN, B.N.; KOCHKINA, T.P.; PUSTYLNIK, B.I.

The quasi-classical analysis of the elastic scattering of complex nuclei. Acta physica Pol 24 no.3:427-434 S'63.

1. Joint Institute for Nuclear Research, Laboratory of Theoretical Physics, Laboratory of Nuclear Reactions, Computing Center, Dubna, U.S.S.R.

KALINKIN, B.N.; PUSTYL'NIK, B.I.

Elastic scattering of heavy ions in the quasi-classical approximation.
Acta physica Pol 23 no.3:375-381 Mr '63.

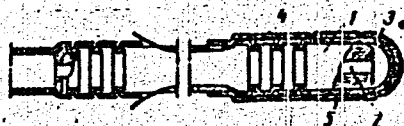
1. Ob'yedinennyy Institut yadernykh issledovaniy, Dubna, SSSR.

1-36204-65 EWT(d)/EWT(m)/EWA(d)/EWP(v)/EWP(j)/EWP(k)/EWP(h)/EWP(l) PC-4/Pf-4
ACCESSION NR: AP5010129 RM UR/0286/64/000/013/0071/0072 21
AUTHOR: Angenitskaya, R. B.; Bushev, I. G.; Fustyl'nik, I. A. 26 B
TITLE: Sensor for determination of the moisture content of a material, for example,
a structural part. Class 42, No. 163779
SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 13, 1964, 71-72
TOPIC TAGS: industrial instrument, moisture measurement 10
Translation: For determining the moisture content of a material, for ex-
ample, a structural part, a sensor that can be inserted into the part. in-

Card 1/2

L-36204-65

ACCESSION NR: AP5010129



Keys: 1 - ebonite bar; 2 - through opening; 3- and 4 - two layers
of vulcanized rubber of the balloon; 5 - electrodes

SUBMITTED: 06Jun63

ENCL: 00

SUB CODE: IE, GO

NO REF SOV: 000

OTHER: 000

JPRS

Card

2/2 Jo

BAKAFIN, V.P.; BUBOK, K.G.; BUGAREV, L.A.; BUNIN, A.I.; VOROB'YEV, K.V.
DROZDOV, V.V.; DOROKHOV, M.S.; ZUBRILOV, S.V.; IGNAT'YEV, L.A.
KARGOPOLOV, I.G.; KLUUSHIN, D.N.; KOMAROV, A.M.; KURILOV, M.S.;
LOMAKO, P.P.; MIKULENKO, A.S.; MIKHAYLOV, M.M.; NEMTINOV, B.A.;
OL'KHOV, N.P.; OSIPOVA, T.V.; PAKHOMOV, Ya.D.; PLAKSIN, I.N.;
PODCHAYNOV, S.F.; RUSTYLIK, I.I.; ROZHKOV, I.S.; SAVARI, Ye.A.;
SEMYNIN, A.P.; SPIVAKOV, Ya.M.; STRIGIN, I.A.; SUSHENTSOV, S.N.;
SYCHEV, P.S.; TROITSKIY, A.V.; USHAKOV, K.I.; KHARLAMOV, A.Ye.;
SHEMYAKIN, N.I.

Nikolai Konstantinovich Chaplygin. TSvet. met. 28 no.2:57-58
Mr-Ap '55. (MIRA 10:10)
(Chaplygin, Nikolai Konstantinovich, 1911-1955)

FUSTYL'NIK, M.Yu.

Mechanization of assembling and welding operations in the machine-
tool industry. Stan.i instr. 33 no.7:1-5 J1 '62, (MIRA 15:7)
(Assembly-line methods) (Electric welding)

PUSTYL'NIK, M. Yu.

Technological level of the construction of welded parts and joints. Tekhnika Bulg 11 no.6:228-231 '62.

AVRUTIN, A.M., inzh.; PESTOV, B.M., inzh.; PUSTYL'NIK, M.Yu., inzh.

Mechanized assembly lines for the manufacture of welded drawing-machine frames. Svar.proizv. no.6:18-22 Je '60. (MIRA 13:7)

1. Minskiy stanko-stroitel'nyy zavod im. Kirova (for Avrutin).
2. Orgstankinprom (for Pustyl'nik, Pestov).
(Assembly-line methods) (Machine-tool industry)

AUTHORS: Pustyl'nik, M.Yu., and Pestov, B.M. SOV/121-58-8-6/29

TITLE: ~~The Mechanisation~~ of Oxygen Cutting in Machine Tool Construction (Mekhanizatsiya kislородnoy rezki v stankostroyenii)

PERIODICAL: Stanki I Instrument, 1958, Nr 8, pp 18-20 (USSR)

ABSTRACT: Mechanised cutting on the ASP machine (Fig 1) can produce edges for welding without machining. Procedures developed at the Machine Tool Works (Stankozavod) imeni Kirov are described. All components are divided into four groups by their production features, each characterised by a typical production procedure. The first group contains rectangular or polygonal plate components up to 16 mm thickness with cut-outs like windows, slots and holes. Cutting the edges on a guillotine is followed by template guided oxygen cutting of the cut-outs. The second group contains strip- and slab-like components up to 200 mm width, 4 m length and a thickness exceeding 16 mm. The whole contour is oxygen-cut with the help of special or general purpose templates, using the preceding cut. The third group contains components of rectangular shape only with or without cut-outs exceeding

Card 1/2

SOV/121-58-8-6/29

The Mechanisation of Oxygen Cutting in Machine Tool Construction

16 mm in thickness. These are wholly oxygen-cut with individual or composite templates making use of preceding cuts. The fourth group contains components with fashioned contours of any thickness. These are oxygen-cut with built-up or individual templates. Examples of each are given. In one instance, a universal template replaces 150 individual templates.

There are 6 figures

Card 2/2

PUSTYL'NIK, M. Yu., inzh.

Universal assembly and welding devices. Svar. proizv. no.10:
23-25 0 '62. (MIRA 15:10)

1. Gosudarstvennyy proyektno-tekhnologicheskii i eksperimental'nyy
institut stankostroitel'noy i instrumental'noy promyshlennosti.

(Welding—Equipment and supplies)

PUSTYL'NIK, M.Yu.; PESTOV, B.M.

Mechanising oxygen cutting used in machine-tool manufacture.

Stan. 1 instr. 29 no. 8:18-20 Ag '58.

(Gas welding and cutting)

(MIRA 11:8)

PUSTYL'NIK, M.Yu., inzh.

Manipulator for welding machine-assembly housings. Svar.
proizv. no.7:28-29 J1 '62. (MIRA 15:12)

1. Gosudarstvennyy proyektno-tekhnologicheskii i eksperimental'-
nyy institut stankostroitel'noy i instrumental'noy promyshlen-
nosti.

(Welding--Equipment and supplies)
(Machinery--Welding)

AUTHORS: Krasnosel'skiy, M.A. and Pustyl'nik, Ye.I. SOV/20-122-6-6/49

TITLE: **The Use of Fractional Powers of Operators in the Study of a Fourier Series by the Eigen Functions of Differential Operators** (Ispol'zovaniye drobnykh stepeney operatorov pri izuchenii ryadov Fur'ye po sobstvennym funktsiyam differentsial'nykh operatorov)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 122, Nr 6, pp 978-981 (USSR)

ABSTRACT: Several questions connected with the theory of Fourier series are formulated and answered by the authors in a very clear manner by the application of negative **fractional powers of differential operators**. 5 theorems are given altogether, e.g.: Theorem: Let T be a positively definite selfadjoint operator in the Hilbert space H , let there exist a completely continuous inverse operator. Let λ_i and u_i be eigenvalues and eigenfunctions of T : $Tu_i = \lambda_i u_i$. Let Ω_α be the region of definition of T^α ($\alpha > 0$). Let the operator $T^{-\beta}$ be continuous and let it act from H into a space $E \subset H$. Let $f \in \Omega_{\beta+\gamma}$ ($\gamma \geq 0$). Then the Fourier series

$$(f, u_1)u_1 + (f, u_2)u_2 + \dots + (f, u_n)u_n + \dots$$

Card 1/2

The Use of Fractional Powers of Operators in the Study of a Fourier Series by the Eigen Functions of Differential Operators SOV/20-122-6-6/49

converges to f (norm convergence with respect to the norm of E), and we have

$$\left\| f - \sum_{i=1}^n (f, u_i) u_i \right\|_E = O(a_n^{-\gamma}),$$

where a_n is the smallest one of the numbers $\lambda_{n+1}, \lambda_{n+2}, \dots$.

ASSOCIATION: Voronezhskiy gosudarstvennyy universitet (Voronezh State University)

PRESENTED: June 5, 1958, by S.L.Sobolev, Academician

SUBMITTED: June 4, 1958

PUSTYL'NIK, Ye.I.

Representation of linear completely continuous operators in Banach spaces. *Izv. vys. ucheb. zav.; mat. no.2:149-153 '60.*

(MIRA 13:7)

1. Voronezhskiy gosudarstvennyy universitet.
(Operators (Mathematics))

PUSTYL'NIK, Ye.I. [Pustyl'nik, IE.I.]

Fractional powers of bounded operators. Dop. AN URSR no.10:1266-
1270 '61. (MIRA 14:11)

1. Voronezhskiy gosudarstvennyy pedagogicheskiy institut.
Predstavleno akademikom AN USSR I.Z. Shtokalo.
(Operators(Mathematics))

KRASNOSEL'SKIY, M.A.; PUSTYL'NIK, Ye.I.

Characteristics of complete continuity of linear and nonlinear
integral operators. Dokl. AN SSSR 142 no.1:25-28 Ja '62.

(MIRA 14:12)

1. Predstavleno akademikom S.L. Sobolevym.
(Operators (Mathematics))

PUSTYL'NIK, Ye.I.

Integral operators in L_p spaces. Dokl. AN SSSR 146 no.6:1271-1274 0 '62. (MIRA 15:10)

1. Voronezhskiy tekhnologicheskii institut. Predstavleno akademikom S.L. Sobolevym.
(Operators (Mathematics)) (Spaces, Generalized)

PUSTYL'NIK, Ye.I.

Interpolation theorems for L_p spaces with pl. Sib. mat. zhur. 4 no.2:
318-324 Mr-Apr '63. (MIRA 16'3)
(Interpolation) (Spaces, Generalized)

PUSTYL'NIK, Ye.I.

Convergence of series in eigenfunctions of a completely continuous
operator in Banach spaces. Sib. mat. zhur. 4 no.3:705-708 My-Je
'61 (MIRA 16:6)
(Eigenfunctions) (Operators (Mathematics)) (Series)

ZABREYKO, P.P.; KRASNOSEL'SKIY, M.A.; PUSTYL'NIK, Ye.I.

Fractional powers of elliptic operators. Dokl. AN SSSR 165
no.5:990-995 D '65. (MIRA 19:1)

1. Voronezhskiy gosudarstvennyy universitet. Submitted April
26, 1965.

ZABREYKO, P.P.; KRASNOBEL'SKIY, M.A.; PUSTYL'NIK, Ye.I.

Problem involving fractional powers of operators. Usp. mat.
nauk 20 no.6:87-89 N-D '65. (MIRA 18:12)

1. Submitted Jan. 21, 1965.

ZABREYKO, P.P.; PUSTYL'NIK, Ye.I.

Interpolational properties of the absolute continuity of a
linear operator. Uch. zap. Kaz. un. 124 no.6:114-118 '64.
(MIRA 18:9)

PUSTYL'NIK, Ye.I.

Potential type operators in the case of sets with abstract measures.
Dokl. AN SSSR 156 no. 3:519-521 '64. (MIRA 17:5)

1. Predstavleno akademikom S.L.Solbolevym.

DOLIDZE, G.M.; KIRTADZE, M.G.; KOLBANOVSKIY, Yu.A.; LUK'YANOV, A.T.;
POLAK, L.S.; PUSTYL'NIKOV, L.M.; TSETSKHLADZE, T.V.

Kinetics of radiation-induced isotope exchange of deuterium
with hydroxyl groups of silica gel. Kin. i kat. 6 no. 6:
1003-1009 N-D '65 (MIRA 19:1)

1. Institut fiziki AN Gruzinskoy SSR; Institut neftekhimicheskogo sinteza AN SSSR imeni Topchiyeva i Kazakhskiy gosudarstvennyy universitet imeni Kirova. Submitted April 24, 1965.

L 22102-66 EWT(d)/T/EWP(1) IJP(a)

ACC NR: AP6012664

SOURCE CODE: UR/0031/65/000/011/0035/0039

AUTHOR: Zherebyat'yev, I.F. (Candidate of physical and mathematical sciences); Luk'-yanov, A.T. (Candidate of physical and mathematical sciences); Molyukov, I.D. (Candidate of physical and mathematical sciences); Pustyl'nikov, L.M.

ORG: none

TITLE: Numerical solution of some problems in mechanics and physics on analog computers

SOURCE: AN KazSSR. Vestnik, ²¹no. 11, 1965, 35-39

TOPIC TAGS: mathematic conference, data processing conference, analog computer, computer circuit, approximation, differential equation

ABSTRACT: This article is an abridgment of a paper given at the Second All-Union Conference on Computer Mathematics, 22-26 January 1965 in Moscow. The authors propose a method of static (discrete) modeling based on using an electric circuit for reproducing a finite difference approximation of the initial differential equations. As an example of application of the method, a non-stationary equation of thermal conductivity with phase transitions (melting, evaporation) is considered, taking the temperature relationship of the thermophysical properties of the material into account. The equations and electric circuit are given. Solution of an equation for non-stationary diffusion of a gas in a liquid in the presence of a chemical reaction of fractional order is considered as well as an example of solving hyperbolic equations. Orig. art. Card 1/2

L 22102-66

ACC NR: AP6012664

D

has: 3 figures and 15 formulas. [JPRS]

SUB CODE: 09, 12 / SUMB DATE: none / ORIG REF: 005 / OTH REF: 001

Card 2/2

BLG

PUSTYL'NIKOV, L.M.; LUK'YANOV, A.T.; FASMAN, A.E.; IKHSANOV, Zh.;
SOKOL'SKIY, D.V.

Measurement of the gradient of hydrogen concentration in a
solution in the homogeneous catalytic reduction of $\text{Cr}_2\text{O}_7^{2-}$ anion
in the presence of Cu(II). Zhur.fiz.khim. 39 no.10:2530-2535 0
'65. (MIRA 18:12)

1. Kazakhskiy gosudarstvennyy universitet imeni Kireva.
Submitted September 2, 1964.

LUK'YANOV, A.T.; PUSTYL'NIKOV, L.M.; SHAVROV, A.A.

Numerical solution of the problems of chemical kinetics by means
of static electron integrators. Dokl. AN SSSR 166 no.3:651-653
Ja '66. (MIRA 19:1)

1. Kazakhskiy gosudarstvennyy universitet im. S.M.Kirova.
Submitted April 17, 1965.

PUSTYNNIKOV, P.; SHIBAKIN, V.

Aren't you the boss of the dormitory? Sov. profsoizny 18 no.24:
23-24 D '62. (MIRA 16:1)

1. Predsedatel' byuro professional'noy organizatsii fakul'-
teta transportnogo mashinostroyeniya Moskovskogo vysshego
tekhnicheskogo uchilishcha im. Baumana (for Pustynnikov).

(Moscow—Student housing) (Moscow—Trade unions)

TEPINKICHIYEV, Vladimir Karpovich, doktor tekhn.nauk, prof.; FUSTYNNIKOV, Vasiliy Grigor'yevich, kand. tekhn.nauk, dotsent; MUDRETsov, Gennadiy Ivanovich, starshiy prepodavatel'; GLADCHENKO, Aleksandr Georgiyevich, aspirant

Electrical drive of the program control system of a vertical drilling machine. Izv.vys.ucheb.zav.; elektromekh. 8 no.9:998-1001 '65.
(MIRA 18:10)

1. Zaveduyushchiy kafedroy metallovezhushchikh stankov i instrumentov, proretik po nauchnoy rabote Rostovskogo-na-Donu instituta sel'skokhozyaystvennogo mashinostroyeniya (for Tepinkichiyev). 2. Zaveduyushchiy kafedroy elektrotekhniki Rostovskogo-na-Donu instituta sel'skokhozyaystvennogo mashinostroyeniya (for Fustynnikov). 3. Kafedra elektrotekhniki Rostovskogo-na-Donu instituta sel'skokhozyaystvennogo mashinostroyeniya (for Mudretsov, Gladchenko).

PUSTYNNIKOV, Vasily Grigor'yevich, kand.tekhn.nauk, dotsent;
MUDRETsov, Gennadiy Ivaⁿovich, starshiy prepodavatel'

Device for observing amplitude-phase characteristics using an
electronic model of a complex number. Izv.vys.ucheb.zav.;
elektromekh. 6 no.2:246-251 '63. (MIRA 16:4)

1. Zaveduyushchiy kafedroy elektrotekhniki Rostovskogo-na-Donu
instituta sel'skokhozyaystvennogo mashinostroyeniya (for
Pustynnikov). 2. Kafedra elektrotekhniki Rostovskogo-na-Donu
instituta sel'skokhozyaystvennogo mashinostroyeniya (for
Mudretsov).

(Cathode ray oscillograph) (Numbers, Complex)

PUSTYL'NIKOV, V.M. (Moskva)

Design of precision-type d.c. stabilizers according to the given
monotonous transient characteristics. Avtom. i telem. 23 no.1:
106-115 Ja '62. (MIRA 15:1)
(Voltage regulators) (Electric power supply to apparatus)

GRADETSKIY, V.G.; PUSTYL'NIKOV, V.M.; RYBASHOV, M.V.

Eighth Scientific and Technical Conference of the Young Scientists
of the Institute of Automatic and Remote Control. Avtom.i telem.
23 no.4:546-549 Ap '62. (MIRA 15:4)
(Automatic control—Congresses) (Remote control—Congresses)

33771
S/103/62/023/001/011/014
D201/D304

9,2510/1040, 1159,1331)

AUTHOR: Pustyl'nikov, V.M. (Moscow)

TITLE: Design of precision d.c. voltage stabilizers from a given monotonic transient response

PERIODICAL: Avtomatika i telemekhanika, v. 23, no. 1, 1962,
106 - 115

TEXT: The author attempted to determine a method of evaluation and design of d.c. voltage stabilizers with nearly monotonic transient responses, together with a high static stability and practical component parameters. The transient processes at the stabilizer output, with step-changes of the mains voltage, are determined by the

operator $K_{in}(p) = \frac{\Delta U_{out}(p)}{\Delta U_{in}(p)}$, and for step-changes of the load - by

the stabilizer internal operator impedance $Z_{int}(p) = \frac{\Delta U_{out}(p)}{\Delta I_{load}(p)}$.

It is shown that both functions differ only by a constant factor
Card 1/4

Design of precision d.c. voltage ...

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S/103/62/023/001/011/014
D201/D304

and that replacing a one-stage amplifier in the stabilization chain by a multi-stage one, results only in the increase in the delay-time at the feedback output. The suggested bloc diagram of the stabilizer is given in Fig. 4 in which the high-frequency amplification is obtained in a separate wide-band amplifier A_{HF} connected in parallel to the chopper modulated amplifier A_{MDM} in the control feedback circuit. The addition of signals from both channels is directly at the grids of controlled valves. Capacitor C_K is included as a correcting capacitance to improve the amplitude-frequency response. In its absence the response has a dip at the high frequency end, resulting in slowly attenuated transient oscillations. The experimental voltage stabilizer, designed according to the described method, had the following characteristics: 1) Instability with $\pm 15\%$ mains voltage fluctuations not exceeding 0.01% ; 2) Static output voltage variation not exceeding 0.008% for $0-100$ mA load current changes; 3) Output voltage drift less than 0.01% for 8 hours; 4) Background noise in the output of the order of 0.003% ; 5) With a sinusoidal change of load current of 50 mA amplitude, the ampli-

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33771

S/103/62/023/001/011/014
D201/D304

Design of precision d.c. voltage ...

tude of output voltage change does not exceed 0.005 % at frequencies 20 c/s to 100 kc/s; 6) With ± 100 mA step load current changes, the overshoot of the transient is 30 mV or 0.03 % of 100 V. (The calculated overshoot was 0.01 %). The same overshoot was observed for 15 V step changes in the mains voltage. Total instability for 8 hours of operation with ± 100 mA load current changes was 0.083 % (with ambient temperature changes normal for lab. conditions). There are 10 figures and 6 references: 4 Soviet-bloc and 2 non-Soviet-bloc. The references to the English-language publications read as follows: D.A. Noden, IRE National Convention Record, v. 6, no. 4, 1958; R.L. Garvin, The Review of Scientific Instruments, v. 29, no. 3, 1958.

Card 3/4

LYUTIKOV, R.A.; PUSTYL'NIKOV, V.M.

Determining the electric conductivity of high-temperature slags.
Vest.AN Kazakh.SSR. 1970-75 My '60. (MIRA 13:7)
(Slag electric properties)

WRITE BELOW THIS LINE ↓

POSTCARD

ACCESSION NR: AP4045919

S/0119/64/000/009/0017/0019

AUTHOR: Pustylnikov, V. M. (Candidate of technical sciences)

TITLE: Secondary instrument for frequency-type sensors

SOURCE: Priborostroyeniye, no. 9, 1964, 17-19

TOPIC TAGS: automatic control, automatic control design, automatic control system, automatic control theory, frequency type sensor, secondary instrument

ABSTRACT: A secondary instrument has been developed for frequency-type sensors operating with continuously-generated signals at 1,000-2,000 cps. The instrument is based on an MSP1-01 automatic bridge whose measuring circuit has been replaced by a frequency-dependent bridge circuit described by V. Yu. Kneller, et al. (Izm. tekhnika, 1963, no. 6). Functional and simplified connection diagrams are explained. The following test data of the instrument is reported: warm-up reading drift, 0.5%; sensitivity, 1-2 cps, or 0.1-0.2% of

Card 1/2

ACCESSION NR: AP4045919

full scale; supply-voltage fluctuation $\pm 10\%$ is tolerable; measurand-frequency voltage variation within 1.5—5 v. is tolerable; however, when the latter voltage contains higher harmonics, an additional error results. "B. G. Naumov took part in the experimental work." Orig. art. has: 3 figures and 7 formulas.

ASSOCIATION: Institut avtomatiki i telemekhaniki AN SSSR (Institute of Automation and Telemechanics, AN SSSR)

SUBMITTED: 00

ENCL: 00

SUB CODE: IE, DP

NO REF SOV: 003

OTHER: 000

Card 2/2

PALEY, A.V., starshiy prepodavatel'; PUSTYL'NIKOV, V.S., inzh.

Reproduction of the function of two independent variables. Izv. vys.
ucheb.zav.; prib. no.2:36-43 '58. (MIRA 11:7)

1.Penzenskiy industrial'nyy institut.
(Functions of several variables) (Mathematical instruments)

PUSTYL'NIKOV, Ya.A.

Water filtration in a two-layer medium. Izv. AN Uz. SSR. Ser.
tekh. nauk 8 no.3:54-61 '64. (MIRA 17:11)

1. Institut vodnykh problem i gidrotekhniki Gosudarstvennogo
komiteta po khlopkovodstvu Sredney Azii.

PUSTYNNIKOV, Il'ya Andreyevich; PASYNKOV, B., red.; CHEPUSETANOVA, G.,
tekhn.red.

Rubtsovsk. Barnaul, Altaiskoe knizhnoe izd-vo, 1959. 47 p.
(MIRA 13:3)

(Rubtsovsk--History)
(Rubtsovsk--Economic conditions)

BOROVIKOV, Aleksandr Ivanovich, dotsent; PUSTYNNIKOV, Vasiliy Grigor'yevich
kanl. tekhn. nauk, dotsent

Inertialess phase-sensitive voltmeter. Izv. vyz. ucheb. zav.;
elektromekh. 7 no.9:1157-1160 '64 (MIRA 18:1)

1. Kafedra avtomatizatsii proizvodstvennykh protsessov Rostov-
skogo instituta sel'skokhozyaystvennogo mashinostroyeniya (for
Borovikov). 2. Zaveduyushchiy kafedroy elektrotekhniki Rostovskogo
instituta sel'skokhozyaystvennogo mashinostroyeniya (for Pustynnikov).

DZHEMELIA, V.V., inzh.; PUSTINNIKOV, V.G., kand. tekhn. nauk

Two-parameter device for automatic control of moisture in grain.
Priborostroenie no.7:28-29 J1 '65. (MIRA 18:7)

S/115/60/000/05/18/034
B007/B011

AUTHORS: Pustynnikov, V. G., Shatskiy, N. Kh.

TITLE: Measurement of Electric Vector Quantities

PERIODICAL: Izmeritel'naya tekhnika, 1960, No. 5, pp.33-35

TEXT: A description is given here of vector meters⁵ developed by the authors for measuring the module, the argument, and the components of an electric vector quantity. They are based on the principle of an electronic phase-sensitive differential amplifier. The electronic vector meter consists of a measuring element and a special phase shifter. The electric vector quantity to be investigated is given for the measuring element input, and the components of this quantity are produced at the output. The circuit of the measuring system is shown in Fig. 1 and described. In those cases where the frequency of the network feeding the phase shifter does not coincide with the frequency of the quantity to be measured, the authors offer a vector meter featuring a phase shifter with selayns (Fig. 2). If, however, the two frequencies mentioned coincide, a three-phase voltage

Card 1/2

Measurement of Electric Vector Quantities S/115/60/000/05/18/034
B007/B011

is applied to the rotor windings of both selsyns with the same phase sequence being maintained, while the stator winding voltage is used for feeding the anode circuits of the tubes (Fig. 3). The accuracy of the operation of the measuring element of the devices shown here is mainly dependent upon the differences in the characteristics of the individual triodes. For this reason, a balancing that compensates these differences must be carried out before each measurement. There are 3 figures and 1 Soviet reference. ✓C

Card 2/2

POSTYNNIKOV, Vasilii Grigor'evich, kand.tekhn.nauk, dotsent

General principle for shaping a multidimensional signal in multiple-frequency control systems. Izv.vys.ucheb.zav.; elektromekh 8 no.9:1056-1062 '65. (MIRA 18:10)

1. Zaveduyushchiy kafedroy elektrotekhniki Rostovskogo-na-Donu instituta sel'skokhozyaystvennogo mashinostroyeniya.

PUSTYNNIKOV, V.G.; ANISIMOV, S.D.

Multiparametric electromagnetic testing of steel products. Zav. lab.
30 no.10:1236-1239 '64. (MIRA 18:4)

1. Rostovskiy institut sel'skokhozyaystvennogo mashinostroyeniya.

PUSTYNNIKOV, V.G., inzh.; BOROVIKOV, A.I.

Automatic temperature control in heating parts for hardening with
high frequency currents. Metalloved. i term. obr. met. no.9:
56-59 S '61. (MIRA 14:9)

1. Rostovskiy institut sel'khoz mashinostroyeniya.
(Induction heating)

25455

S/144/61/000/006/003/004
D207/D306

16,8000 (103,112,1068)

AUTHORS: Pustynnikov V.G., Candidate of Technical Sciences,
Docent, and Burdakov P.M., Engineer

TITLE: A device for experimentally determining the frequency
characteristics of mechanical automatic control systems

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Elektro-
mekhanika, no. 6, 1961, 103-108

TEXT: The devices are based on Burdakov's method of measuring by
determining the voltage on the terminals of a slowly discharged condenser
C which has been charged instantaneously through a controlled contact K
under the influence of the tension to be measured (Fig. 1). The following
cases are considered: Measurements of dynamic deformations at a fixed
instant; registration of frequency characteristics of mechanical systems;
measurement of angular velocity of a shaft at a fixed moment. The device
for the second case is shown in Fig. 4. The master device is an ordinary
sinusoidal potentiometer SP made on the principle of a slide rheostat.
Its collector is moved by a motor, whose velocity is controlled with the

Card 1/3

25455

S/144/61/000/006/003/004
D207/D306

A device for...

aid of potentiometer R_p. On the same shaft the collector K is situated, having one circuit-closing strip in the same plane as the potentiometer collector. The strip can close alternatively the two pairs of brushes situated at right angles to each other; the brushes can rotate with respect to fixed parts of the device. If the brushes are so situated that one pair is on the line pp of the potentiometer, the strip will close the brush pair p at the instant corresponding to maximal value of input signal and the condenser C_p will receive the output voltage of the system. With the aid of this device one can obtain immediately the amplitude characteristic and the phase characteristic. Formulae for determination of deformation, mean value of amplitude characteristic etc. are given. There are 6 figures and 2 Soviet-bloc references.

ASSOCIATION: Kafedra obshchey elektrotehniki Rostovskogo instituta sel'khoz mashinostroyeniya (Department of General Electro-technics, Rostov Institute of Agricultural Machine-building) (V.G. Iustynnikov)

Card 2/3

PUSTYNNIKOV, V.G., kand.tekhn.nauk; POLOZKOV, A.A., kand.tekhn.nauk

**Tansomentering agricultural machinery. Trakt. i sel'khoz mash.
no.1:31-33 Ja '59. (MIRA 12:1)**

- 1. Rostovskiy-na-Donu institut sel'khoz mashinostroyeniya.
(Agricultural machinery--Testing)**

PUSTYNNIKOV, Vasilii Grigor'yevich, kand. tekhn. nauk, dotsent; ANISIMOV,
Sergey Dmitriyevich, aspirant

Electronic device for controlling quality in thermal treatment
of steel components. Izv. vys. ucheb. zav.; elektromekh. 7
no.4:471-478 '64 (MIRA 17:7)

1. Kafedra elektrotekhniki Rostovskogo-na-Donu instituta sel'sko-
khozyaystvennogo mashinostroyeniya. 2. Zaveduyushchiy kafedroy
elektrotekhniki Rostovskogo-na-Donu instituta sel'skokhozyaystven-
nogo mashinostroyeniya (for Pustynnikov).

S/129/61/000/009/005/006
E073/E335

AUTHORS: Pustynnikov, V.G. and Borovikov, A.I.

TITLE: Automatic Monitoring of the Temperature During
High-frequency Heating of Components to be Quenched

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov,
1961, No. 9, pp. 56 - 59

TEXT: A new principle is applied, based on utilising the sudden change in permeability and electric conductivity which occurs in the neighbourhood of the Curie point. For most steels the Curie point is between 760 and 780 °C and does not depend on the heating speed, voltage and frequency of the power supply, the configuration of the quenched component and the method of heating. At the beginning of the heating process, the entire component is at a low temperature and, consequently, a relatively large current flows through the primary circuit of the transformer. As the temperature is increased, the Curie point is gradually reached at various spots of the component; this results in a reduction of the current intensity in the primary of the transformer. When the entire component has

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Automatic Monitoring of

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E073/E335

reached the critical temperature, the current in the primary circuits stabilises at a minimum value, which corresponds to the no-load value. Fig. 3 shows an oscillogram of the changes in the current during the process of heating of a part using a transformer in which the primary current reaches 250 A in the case of an oscillator with 500 V, 10 000 c.p.s. The current stabilises to about 150 A at the end of the process, the no-load current being 110 - 120 A. The beginning of the decrease in the current (point a) corresponds to the beginning of the magnetic transformations, whilst the end of the decrease (point 6) indicates that all the points in the heated crust have reached the Curie-point temperature (750 °C). It is most convenient to follow the change in the current intensity by using the first derivative di/dt , which is zero beyond the point 6. A control pulse for automatic control of the process of heating can be obtained by means of a circuit arrangement, shown in Fig. 4, consisting of the following blocks: 1 - KA-11 machine for automatic feeding-in of the components to the inductor and ejection into the oil baths after heating; 2 - input

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S/129/61/000/009/005/006
E075/E335

Automatic Monitoring of

block into which a high-frequency current, varying with time as the heating of the component progresses, is fed by means of a current-transformer. The alternating current is transformed into proportional DC voltage values so that at the output of this block a DC voltage is obtained $U(t) = K \cdot i(t)$, where K is the proportionality coefficient; 3 - differentiating block, generating a signal $dU/dt = K di/dt$, which is proportional to the derivative of the current; 4 - amplifier, at the output end of which a relay II is fitted. This relay operates at the point a of the oscillogram and releases at the point b ; 5 - block containing the electric automation circuit, which controls the technological process. The control pulse, fed by this block, is coordinated by the block 6 - which controls the dosage of time, feedback and blocking. For quenching, a heating temperature of $900 - 10^{\circ}\text{C}$ is required, so that the component has to be heated a little longer after reaching the Curie point and it is for this purpose that the time dosage is applied. If the desired heating temperature (900°C) is taken as 100%, monitoring of the temperature on the basis of the Curie point enables determining 89-90% of the desired temperature. The final

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Automatic Monitoring of

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E073/E335

temperature rise is controlled by time dosage for a permissible error in this dosage time of 20-30%; the resulting error in the final temperature will be 2-3%. The here described equipment was developed to be used in conjunction with the automatic quenching machine KA-11. It consists of two parts, one for generating the command pulse, the other for final heating of the component from the Curie point to the quenching temperature.

There are 6 figures.

ASSOCIATION: Rostovskiy institut sel'khoz mashinostroyeniya
(Rostov Institute for Agricultural Machinery)

Card 4/5

PUSTYNNIKOV, Vasilii Grigor'yevich, dotsent, kand.tekhn.nauk

Generalized method for calculating measuring circuits without
power at the output. Izv.vys.ucheb.zav.; elektromekh. 3 no.2:
106-109 '60. (MIRA 13:7)

1. Zaveduyushchiy kafedroy obshchey elektrotekhniki Rostovskogo
instituta sel'khoz mashinostroyeniya.
(Electric circuits)

PUSTYNNIKOV, Vasilii Grigor'yefich, kand.tekhn.nauk, dotsent

New method for automatically regulating the parameters of bridge networks. Izv. vys. ucheb. zav.; elektromekh. 4 no.3:157-158 '61. (MIRA 14:7)

1. Zaveduyushchiy kafedroy obshchey elektrotekhniki Rostovskogo instituta sel'skokhozyaystvennogo mashinostroyeniya.
(Bridge circuits)
(Automatic control)

PUSTYNNIKOV, V.G. (Rostov-na-Donu)

Auxiliary instrument for ellipsometers used in the measurement of principal dynamic stresses. Izv.AN SSSR.Otd.tekh.nauk no.5:
124-130 My '56. (MLRA 9:5)

1. Rostovskiy-na-Donu institut sel'khoz mashinostroyeniya.
(Strain gauges)

PUSTYNNIKOV, V.G. (Rostov-na-Donu)

Device for solving the equation of ellipsoidal deformation (ellipso-
meter). Inzh.sbor. 19:161-166 '54. (MLBA 7:10)
(Deformations (Mechanics))

S/144/63/000/002/003/004
A055/A126

AUTHORS: Pustynnikov, V.G., Mudretsov, G.I.

TITLE: Device for observing amplitude-phase characteristics with the aid of an electronic model of a complex number

PERIODICAL: Elektromekhanika, no. 2, 1963, 246 - 251

TEXT: The authors describe first an electronic circuit for the simulation of a complex number. The complex number is simulated by a luminous point on an oscillograph screen acting as a complex plane. The circuit contains a phase-shifter that introduces a phase-shift equal to the argument of the simulated complex number. From the phase-shifter the voltage is applied to a pulse-converter that forms short-duration pulses emerging at the beginning of each period when the instantaneous sinusoidal voltage value passes through zero. The pulses modulate the brightness of the beam. It is only at the moment of the controlling pulse arrival that the beam is ignited for a short time. Thus only one point of the circle is visible on the screen. With the aid of voltage dividers the sweep voltage value is set so as to correspond to the modulus of the complex

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